

INSTRUCTIONS

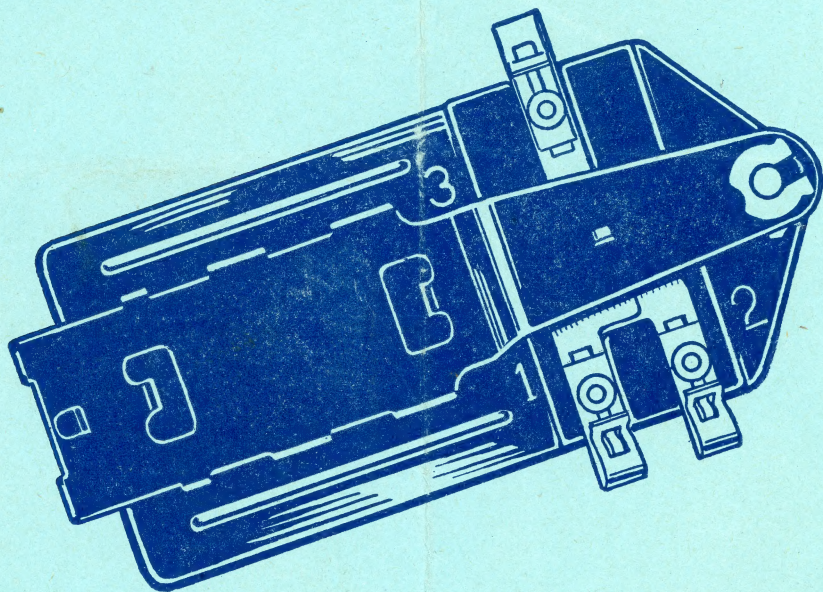
FOR CONNECTING

LIONEL No. 153 C

CONTACTOR

FOR ALL LIONEL TRACK
EXCEPT "OO" GAUGE

"CONTACTOR" MAY BE USED WITH THE FOLLOWING LIONEL ACCESSORIES: NO. 152 CROSSING GATE, NO. 45N AUTOMATIC GATEMAN AND NO. 153 BLOCK CONTROL.



THE LIONEL CORPORATION

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CHICAGO SHOWROOMS
MERCHANDISE
MART

APPROVED SERVICE STATIONS IN THE PRINCIPAL CITIES, UNITED STATES AND CANADA

INSTRUCTIONS for OPERATING

No. 45N

AUTOMATIC GATEMAN

Slide No. 153C Contactor beneath track so that one track tie rests firmly upon top contact plate. Do not fasten down track for several sections on either side of Contactor, otherwise accessory will operate continuously.

Connect Gateman to No. 153C Contactor and Transformer, as shown in Figure 1. After all connections are made and Transformer current is on, the Contactor must be adjusted. The Gateman operates when weight of the train passing over the Contactor closes the circuit. Adjust the Contactor as follows: With train stopped on track several sections away from the Contactor, turn adjustment nut either up or down until the Gateman comes out of his shack, then turn the nut in the opposite direction just enough to cause Gateman to return to his shack. Start train and when it passes over the Contactor, the Gateman will come out swinging his red lantern and will stay out until last car has passed then he will return to his house, the door closing behind him.

This accessory is adjusted to operate on 12 Volts. The table (page 5) shows the appropriate binding posts to use in order to obtain this voltage from the various types of Lionel transformers.

In case of burned out lamp, replace with No. 616-13 12-volt clear lamp which may be obtained from your regular Lionel dealer.

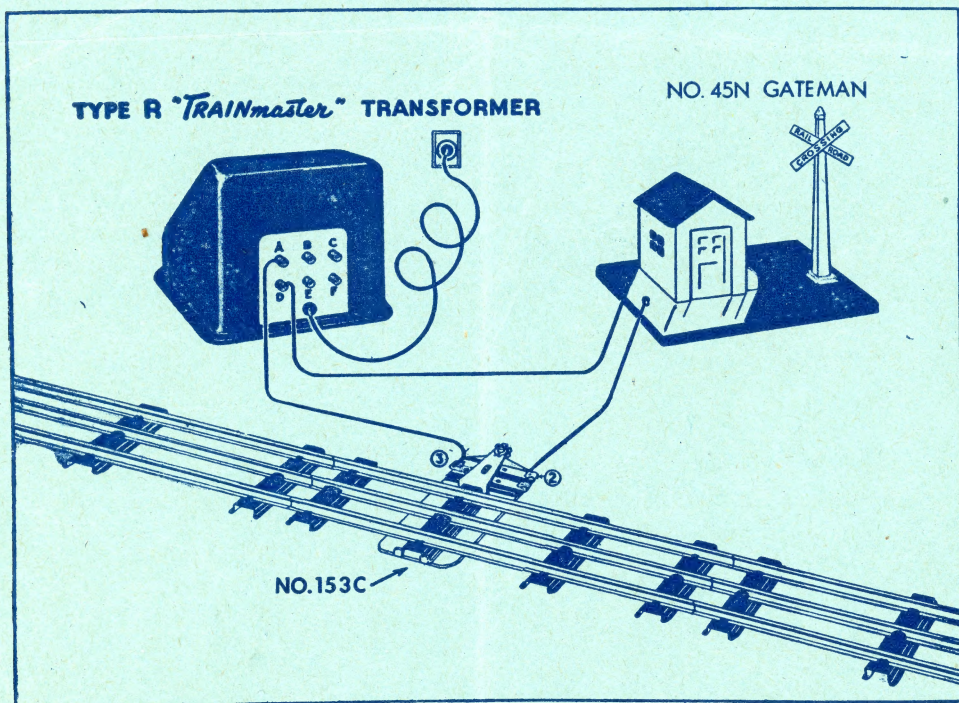


Figure 1—How to connect No. 45N Automatic Gateman to Type "R" Trainmaster Transformer. (This diagram does not include the regular Lockon connection necessary to operate train.)

INSTRUCTIONS for OPERATING

No. 152 CROSSING GATE

Slide No. 153C Contactor beneath track so that one track tie rests firmly upon top contact plate. Do not fasten down track for several sections on either side of Contactor, otherwise accessory will operate continuously.

Connect Crossing Gate to Contactor and Transformer, as shown in Figure 2. After all connections are made and transformer current is on, the Contactor must be adjusted. Crossing Gate operates when weight of the train passing over the Contactor closes the circuit. Adjust the Contactor as follows: With train stopped on track several sections away from the Contactor, turn adjustment nut either up or down until the Gate lowers, then turn back the nut just enough to cause Gate to rise. Start train and when it passes over the Contactor, Crossing Gate will lower and stay down until the last car of the train has passed then it will rise automatically just like a real railroad Crossing Gate.

This accessory is adjusted to operate on 8-12 volts. The table (page 5) shows the appropriate binding posts to use in order to obtain this voltage from the various types of Lionel transformers.

In case of burned out lamps, replace with No. 152-33 12-volt red lamp which may be obtained from your regular Lionel dealer.

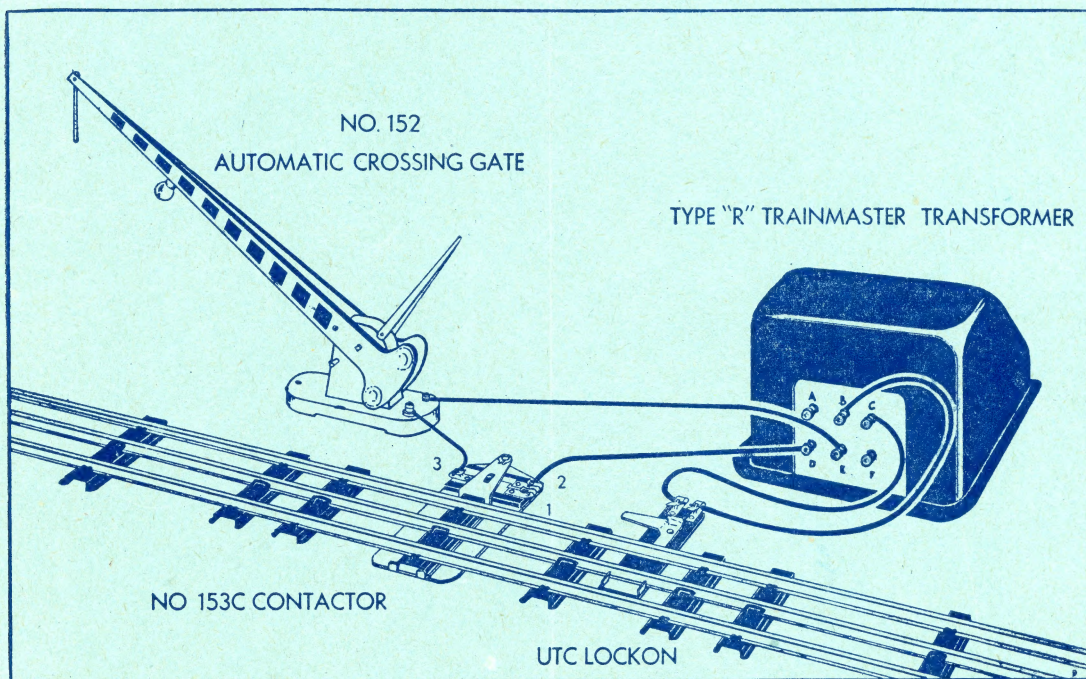


Figure 2—How to Connect No. 152 Crossing Gate to Type "R" Trainmaster Transformer.
(Lockon Connection is for Train Operation.)

Instructions for Operating No. 153 AUTOMATIC BLOCK SIGNAL

Lionel No. 153 Automatic Block Signal can either be used as a simple color light signal with the green light changing to red as the train goes by and then changing back to green when train has passed, or it may be used when operating two trains on the same track as a color light train control.

HOW TO CONNECT AS SIGNAL ONLY

Follow wiring diagram shown in Figure 3.

Remove No. 153C Contactor and four connecting wires from the envelope.

Slide Contactor beneath track so that one track tie rests firmly upon top contact plate. Do not fasten down track for at least several sections on each side of Contactor.

Attach three wires to the binding posts on Signal and connect the two wires from the *outside posts* to the No. 2 and No. 1 terminals on Contactor. Connect No. 3 terminal to your transformer. Use the same binding post on transformer for this connection that has the wire running from the No. 1 terminal of the Lockon. Then connect the center binding post on Signal to the No. 2 terminal on Lockon.

HOW TO ADJUST CONTACTOR

No. 153C Contactor causes Signal to operate when the weight of the train passing over the track makes the necessary electrical contact.

This Contactor has an adjustment nut. With train stopped on track some distance from Contactor, turn adjustment nut *down* as far as it will go. If green light in Signal is illuminated, no further adjustment is necessary. But if red light is on, turn adjustment nut *up* until light changes from red to green.

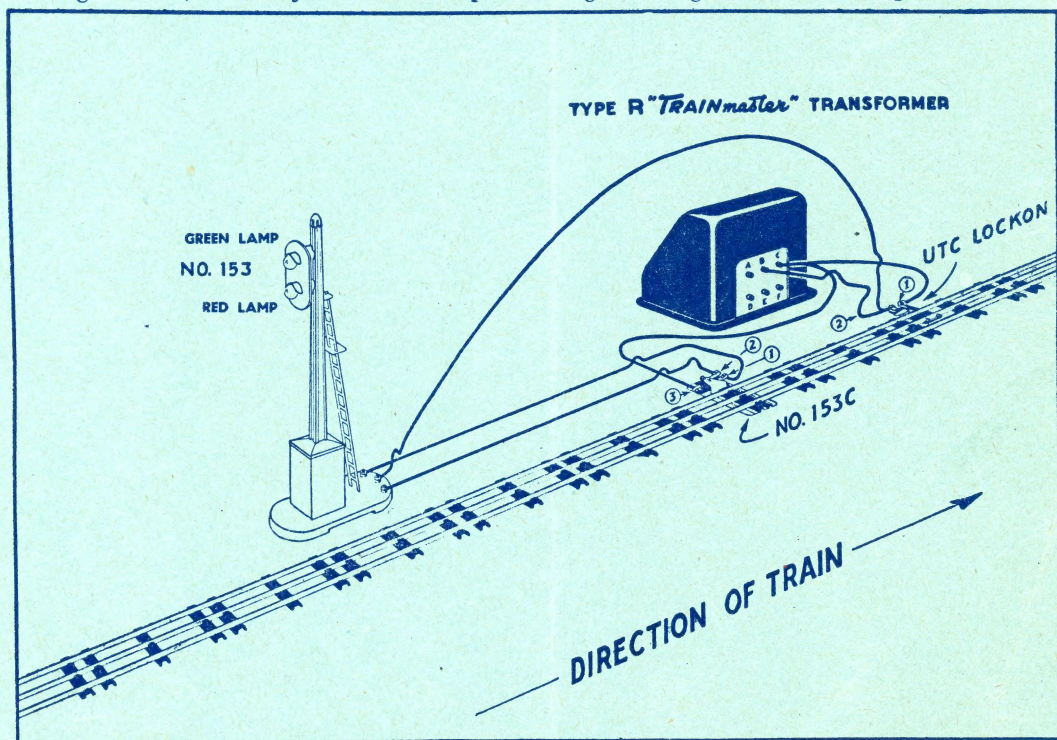


Figure 3—How to wire No. 153 Automatic Block Signal for one-train operation.

INSTRUCTIONS for OPERATING No. 153 AUTOMATIC BLOCK SIGNAL FOR TWO-TRAIN OPERATION

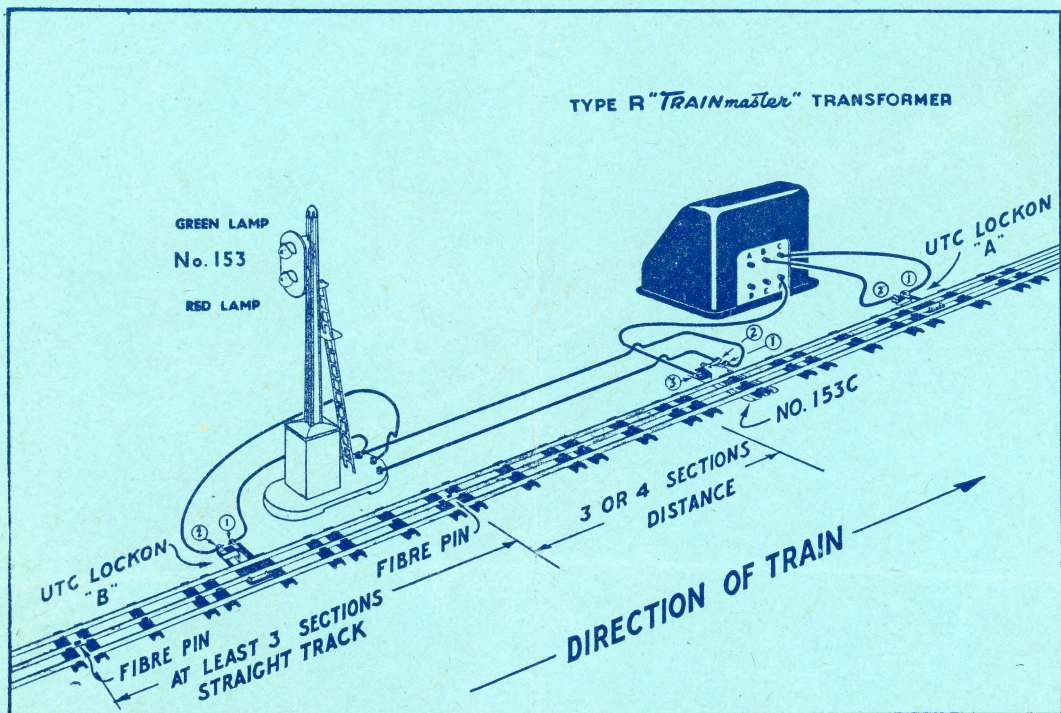


Figure 4—How to wire No. 153 Automatic Block Signal for two-train operation.

HOW TO CONNECT No. 153 FOR TRAIN CONTROL

When operating two trains on the same track, carefully make all wire connections as shown in Figure 4. Note particularly that two fibre pins must be placed in ends of center rails of three joined sections of track to make an insulated block. Four fibre pins are supplied. Choose the two which fit your rails. An extra Lockon included in the envelope must be attached to track *within* the insulated block. This is designated in Figure 4 as Lockon "B".

All connections should be made as shown in illustration.

Adjust Contactor as explained above and carefully follow the directions as to the number of sections of track required. The larger the layout the more effective the operation and the less possibility of collisions.

When Signal is properly connected, action is as follows: Train No. 1 enters block and crosses Contactor. Light changes from green to red and current is cut out of the insulated block. If at that time, Train No. 2 should run on to the insulated block, it would stop. In the meantime, the last car of Train No. 1 has crossed the Contactor, light has changed back to green, current is flowing into the insulated block and Train No. 2 will start up or if it is just now approaching the dead section, it will of course not stop but continue.

When using Type "R" Trainmaster Transformer, the wire connections shown in Figure 4 utilize both knobs on transformer for control. One knob will control the voltage to the insulated block, the other to the rest of the layout. Keep voltage to insulated block two or three volts higher than that for the layout so a halted locomotive will have sufficient current to start easily.

LIONEL TRANSFORMERS

When using Type "Q" Transformer connect the two wires from the No. 1 and No. 2 terminals of Lockon "A" to posts "B" and "U" respectively, and wire from No. 3 terminal on Contactor to post "A" on transformer. Other transformer connections may be found in the table opposite.

Connection	Appropriate Binding Posts on Types				
	'B'	'T' or 'K'	'Q'	'R'	'V' or 'Z'
From Terminal No. 1 of Lockon "A"	B	B	B	C	C
From Terminal No. 2 of Lockon "A"	X	U	U	B	U
From Terminal No. 3 of No. 153C Contactor	A	A	A	F	D

A number of track layouts utilizing the No. 153C Contactor and an insulated block for train control are possible. They may be designed according to space limitations and variety of track equipment available. Regardless of the size of the layout, the basic wiring, as shown in Figure 4, must not be changed.

DISCONNECTING REVERSING UNITS

When operating two trains on train control layouts, be sure to disconnect the reversing units of the locomotives so that trains will go forward after being stopped. Reversing units are disconnected by moving the small lever protruding from boiler top. Be sure locomotive is going forward before moving disconnecting lever.

REPLACEMENT LAMPS

In case of burned out lamps on Signal, replace red lamp with Lionel No. 153-23 and green lamp with No. 153-24 which may be obtained from your dealer.



SERVICE INFORMATION

These articles have been inspected at the Factory and are in perfect condition.

If, in the future, an article should ever require servicing, you may either send it to the nearest Factory Service Station listed on cover, or take it to your nearest Lionel Approved Service Station. Your dealer can tell you the name and address of the Approved Service Man in your district.

If you decide to mail the article to us, be sure to pack carefully to avoid damage in transit. Use the original box, if possible, and enclose in another corrugated box or strong container. A letter in a stamped envelope stating fully the service desired *must be pasted to the outside wrapper*. Post Office regulations do not permit any written instructions to be placed inside package.